REMARKS

Claims 1, 6, 7 and 9-12 are currently pending in the application. Claims 1, 10 and 12 have been amended. Claims 11 has been canceled without prejudice. Although Applicants have canceled claim 11 herein, they respectfully reserve the right to prosecute identical or similar claims in this, or a related application. Claims 13 and 14 have been added. The specific grounds for rejection and Applicant's response to them are set forth in detail below.

1. The Examiner objects to a to a non-translated patent document.

> The Examiner states, "The translated non-patent literature document titled: Viral Infection Model Using Immunodeficiency Mouse, has been considered by the examiner, and acknowledged in form PTO/SB/08. However, the information disclosure statement filed 12/19/2006 fails to comply with 37 CFR 1.98(a)(3)(ii), which requires a copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in § 1.56(c). It has been placed in the application file, but the information referred to therein has not been fully considered, since JP-8-511937 is in the Japanese language."

Applicants respectfully disagree. The Examiner is correct in that JP8-511937 is a non-English publication. However, this publication was cited in the Office Action issued on the corresponding Japanese application (Japanese Patent Application No. 2002-207442) of the present US application, and we believe that this Office Action and its English translation, which we sent to you on December 6, 2006, classify as a concise explanation under §1.98(a)(3)(i). Applicants respectfully request reconsideration.

2. The Examiner objects to Claim 11.

> The Examiner states, "Claim 11 is objected to for reciting "in claim" in the second line. A space is required between the words "in" and "claim"."

Applicants have canceled Claim 11 thereby obviating the objection.

3. Claims 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

> The Examiner States, "Claims 10 and 12 are unclear in the recitation of "mouse model, characterized by comprising the steps of', because it is not clear whether said characterization is in reference to the production method or the mouse model. Further, a mouse model may not be characterized by steps. The inclusion of "characterized by" in the claims is unnecessary.
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> Claim 12 is further unclear, for reciting a human cirrhosis tissue affected with cirrhosis. As cirrhotic tissue must necessarily be affected by cirrhosis, it is not clear how such tissue can be further affected by cirrhosis. A second recitation of cirrhosis is redundant.
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> Claim 11 recites the limitation "the hepatic cirrhosis tissue" in the second line. There is insufficient antecedent basis for this limitation in this claim or in claim I from which this claim depends."

Applicants have amended claims 10 and 12 to obviate the Examiner's basis for rejection. Also, claim 11 has been canceled by the Applicants, also obviating the basis for rejection.

4. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The Examiner states, "Claims 1-10 stand rejected under 35 U.S.C.§112, first paragraph, in the previous office action dated May 3, 2006, for lacking an enablement for the full scope of the claimed invention. The cancellation of claims 2-5 and 8 renders their rejection moot. In view of Applicants' amendment of the claims to limit the cirrhosis animal model to a scid mouse, the grounds of rejection for any animal or any scid animal are hereby withdrawn. The rejection set forth on pages 2-6 of the previous office action dated May 3, 2006 is maintained for claims 1, 6, 7, 9 and 10, and further applied to new claims 11 and 12, for reasons set forth in the following commentary.

Applicants state that the claims have been amended to add a limitation that the human cirrhosis tissues are transplanted to a kidney of a scid mouse. Applicants' arguments have been fully considered, but are not found persuasive. Base claim 1 as amended, is no longer limited to the transplantation of human cirrhotic hepatic tissue, and is directed instead to a cirrhosis scid mouse model characterized in that a human cirrhosis tissue is transplanted in a kidney of a scid mouse. However, the claim language is not commensurate with the enabled scope of the invention (i.e. the transplantation of human Child A cirrhotic liver tissue), as human cirrhosis broadly embraces any type of fibrosis, such as pulmonary fibrosis of the lung. The instant specification is silent on the transplantation of any human cirrhotic tissues having any stage of advancement for.cirrhosis, other than Child A liver tissue to the kidney of a scid mouse. The prior art is also devoid of any teachings regarding the transplantation of non-hepatic cirrhotic tissues to a mouse kidney. As such, a person of skill in the art would need to engage in further undue experimentation to determine the efficacy of transplanting human non-hepatic cirrhotic tissues, or hepatic tissue that is more advanced than the Child A classification, especially in view of the instant specification's teaching that tissue affected by more severe cirrhosis would be difficult to transplant (p. 6, second paragraph).

Thus, the previous rejection of the claims is maintained for claims 1, 6, 7, 9 and 10, and is further applied to newly added claims 11 and 12 for reasons of record and the foregoing discussion.

Applicants respectfully disagree. In regard to the language "Child's C cirrhosis tissue that is "severe cirrhosis tissue" would be difficult to transplant," the specification merely states that use of Child-A hepatic tissues as the "human hepatic tissues" is preferable from the standpoint of severity. A person ordinary skill in the art, from the description of the present invention, would understand that transplant of even severe cirrhosis tissues classified as Child's C cirrhosis tissues would be possible according to the procedures described in the present invention. No skilled artisan would recognize that transplant of such cirrhosis tissues would be impossible. Applicants respectfully request reconsideration.

5. Claims I and 10 stand rejected under 35 U.S.C. 102(e) as being anticipated by Kay et al. (U.S. Patent No: 6,660,905, filed Jul. 12, 2000). The rejection set forth on p. 7 of the previous office action dated May3, 2006 is maintained for claims 1 and 10 and is applied to newly added claim 11, for reasons of record.

> The Examiner States, "Applicants disagree with the rejection, arguing that the invention as now claimed in amended claim 1 relates to a scid mouse model in which human cirrhosis tissues have been transplanted in the kidney. Applicants further argue that human cirrhosis tissues are dysfunctional tissues and that Kay et al. merely teach an animal model for human disorders, using functional tissues, without disclosing anything about an animal model for human disorders using dysfunctional tissues. Applicants arguments have been fully considered, but not found persuasive.
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> In response it should be noted that the degree of dysfunctionality of cirrhotic tissue is dependent upon the degree of progression of cirrhosis, in accordance with the Child-Pugh classification. The instant specification and claim 9 teach the transplantation of Child A liver tissue, i.e. mild cirrhosis or "slightly affected with cirrhosis". The instant specification states that a Child's C cirrhosis tissue that is "severe cirrhosis tissue" would be difficult to transplant (p. 6, second paragraph). None the less, Kay et al. state: "The animals of the invention can also be used to study human liver development and function, both normal and abnormal, e.g. malignant or genetically altered", that can be introduced and maintained in the

> animal models (column 18, lines 50-54). Kay et al. further teach their animal model has broad applicability in the study of degenerative and metabolic diseases of the human liver and provide an animal model for human disorders involving exposure to chemicals or toxins, such as alcoholic cirrhosis (column 3). Thus, dysfunctional tissue transplantation that includes diseased or cirrhotic liver tissue is embraced by the teachings of Kay et al. Therefore, the foregoing statements explicitly teach an animal model of cirrhosis that include the study of abnormal cirrhotic liver tissues.
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> Hence, the rejection is maintained for reasons of record and expanded upon by the commentary given above.

Applicants respectfully disagree. The Examiner states that the degree of dysfunctionality of cirrhotic tissue is dependent upon the degree of progression of cirrhosis, in accordance with the Child-Pugh classification. This is not correct. What is known as "Child's classification" is a system of classification based on histology. It does not measure "the degree of dysfunctionality of cirrhotic tissue."

To be more specific, the Examiner seems to be unclear about the following points (i) to (vi).

(i) "Cirrhosis tissues" are "dysfunctional tissues."

(ii) "Dysfunctional tissues" refers to "severely diseased tissues whose normal tissue functions have been lost."

(iii) "Diseased tissues" does not refer to normal-tissue-like tissues with retained normal functionalities such as proliferating functions (for example, hepatic tissues of a patient carrying hepatitis virus), nor does it refer to tissues (for example, hepatic cancer tissues) whose proliferating ability has been restored (enhanced) compared with normal tissues.

(iv) Cirrhosis is a severe disease *per se*, and severity of the disease is completely irrelevant to implementation of the present invention.

(v) Successful transplant and engrafting of diseased tissues such as cirrhosis tissues as described in the present invention is the first report of its kind.

(vi) Conventional approach to produce a cirrhosis model has been limited to the use of chemicals.

We believe that, based on the foregoing knowledge ((I)-(vi)) that was available at the time of filing of the present invention, the Examiner will understand that:

(a) the present invention is not anticipated by a person ordinary skill in the art from USP 6,660,905, and

(b) the present invention is not obvious from USP 6,66D,905 and Habu et al. (U.S.P Publication No.2004/0016007 (filed May 15, 2001)).

The corresponding Japanese application of the present case was once rejected but was later recognized as being patentable by the Examiner based on the foregoing knowledge ((i)-(vi)) that was available at the time of filing of the invention.

The teachings of Kay et al (USP 6,660,905) referred to by the Examiner lack any specific demonstration. Specifically, the teachings of USP 6,660,905 referred to by the Examiner are not described in this publication as to be enabling by a person ordinary skill in the art.

A person ordinary skill in the art would readily understand this based on the foregoing knowledge ((i)-(vi)) that was available at the time of filing of the present invention. As such, USP 6,660,905 cannot be relied upon to deny novelty of the present invention.

6. Claims 6, 7 and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kay et al., and further in view of Habu et al. (U.S. Patent Publication No.: 2004/0016007, filed May 15, 2001). The rejection set forth on pp. 8-10 of the

previous office action dated May 3, 2006 is maintained for claims 6, 7 and 9 and is applied to newly added claim 12, for reasons of record.

> The Examiner states, "Applicants disagree with the rejection, arguing that the invention as now claimed in amended claims 1, 10 and 12 recite the use of dysfunctional tissues and that Habu et al. do not disclose or suggest an animal model for human disorders using dysfunctional tissues either. Applicants' arguments have been fully considered, but not found persuasive.
>
> Applicant has referred to a foregoing publication, Virus, 49(1), 33-39 (1999). It is not clear how this citation relates to the publications of Kay and Habu. Regarding the recitation of dysfunctional tissues, it is noted that while the instantly amended claims recite cirrhosis tissues, they do not recite the use of dysfunctional tissues. Further, the functionality of transplanted tissues, as relating to the Kay et al. reference was addressed above. As Habu et al. are not required to teach each and every limitation of the claims in an obviousness rejection, the rejection is maintained for reasons of record and the expanded commentary given above."

Applicants respectfully disagree. In addition to the arguments presented above, Applicants wish to note that Virus, 49(1), 33-39 (1999) describes establishing a mouse by fixing functional tissues (human embryonic liver slices, embryonic thymus tissues) in a kidney membrane of a scid mouse. However, the publication does not disclose or suggest an animal model for human disorders using "dysfunctional" tissues. Applicants respectfully request reconsideration.

As to Habu et al. (U.S.P Publication No.2004/0016007 (filed May 15, 2001), the reference does not disclose or suggest an animal model for human disorders using dysfunctional tissues either.

For the reasons set out above, the invention as set forth in claim 1 cannot be readily attained from Kay et al. and Habu et al. The invention of claim 1 is therefore not obvious from these references.

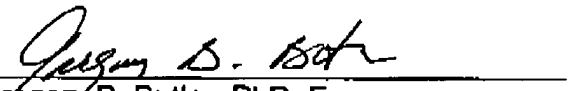
Applicants request the entry of the changes to the claims requested above. No new matter has been added by the amendments to the claims. Applicants submit that the present application and claims, as amended, is in condition for allowance, and, accordingly, early consideration and allowance of the application is respectfully requested.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105, under Order No. 62703(70904). A duplicate copy of this paper is enclosed.

If the undersigned can be of any assistance in advancing the prosecution of this case, the Examiner is invited to contact him through the information given below.

Respectfully submitted,

Date: January 10, 2008

By: 

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